

IN THE CLAIMS

The following is a current listing of all the claims. This listing replaces all earlier amendments and listings of the claims, and follows the new format authorized by the U.S. P.T.O. as of December 2002.

Please cancel Claims 2, 9-17, 21, 28-43, 46-51, 54-70 and 74-94 without prejudice or disclaimer of subject matter.

Please amend Claims 1, 3-8, 18-20, 22-27, 44, 45, 52, 53, 71-73, and add new Claims 95-98 to read as follows.

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1. (Currently Amended) A method of manufacturing an electronic device, ~~including a step of giving a droplet of a liquid containing a formation material of a member that constitutes the electronic device to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, characterized in that said droplet is given while a position on a droplet given surface to which the droplet is given is corrected in accordance with the distribution of distances between said ejecting portion and said droplet given surface on said substrate which occurs when said substrate and said ejecting portion are relatively moved comprising the steps of:~~

moving a droplet ejecting portion of an ink jet device and a substrate to which a droplet is to be ejected relatively in an in-surface direction of said substrate, and detecting a distance between said ejecting portion and a droplet given surface on said substrate; and

ejecting to a plurality of portions separated mutually on the substrate at plural times intermittently the droplet of a liquid containing material for forming the electronic device upon the moving under a control of the distance based on a detection result.

2. (Cancelled)

3. (Currently Amended) A method of manufacturing an electronic device as claimed in claim 2 1, wherein the ~~detection of said~~ detecting of the distance includes a step of measuring the distances between said ejecting portion and ~~all of the droplet given portions within said droplet given surface~~ predetermined portions separated mutually on the substrate.

4. (Currently Amended) A method of manufacturing an electronic device as claimed in claim 2, 1 wherein the ~~detection of said~~ detecting of the distance includes a step of measuring a distance between said ejecting portion and ~~a specific portion of said droplet given surface~~ one or some of predetermined portions separated mutually on the substrate.

5. (Currently Amended) A method of manufacturing an electronic device as claimed in claim 2 1, wherein ~~said detection of the~~ detecting of the distance

includes a step of measuring a distance between said ejecting portion and ~~a specific portion of said droplet given surface, and a step of calculating the distances between said ejecting portion and all of the droplet given portions within said droplet given surface on the basis of said measurement result~~ one or some of predetermined portions separated mutually on the substrate, and a step of calculating the distances between said ejecting portion and others of predetermined portions separated mutually on the substrate, based on the result of the measuring.

6. (Currently Amended) A method of manufacturing an electronic device as claimed in ~~any one of claims claim~~ 1 to 5, wherein the ~~correction of said position to which the droplet is given is made by maintaining the distance between said ejecting portion and the droplet given surface on said substrate constant~~ controlling of the distance based on the detection result is performed by maintaining constant the distance between the ejecting portion and each of plural predetermined portions separated mutually on said substrate.

7. (Currently Amended) A method of manufacturing an electronic device, ~~as claimed in any one of claims 1 to 5, wherein the correction of said position to which the droplet is given is made by changing a timing at which the droplet is ejected from said ejecting portion in accordance with the distribution of the distances between said ejecting portion and the droplet given surface on said substrate~~ comprising the steps of:

moving a droplet ejecting portion of an ink jet device and a substrate to which a droplet is to be ejected relatively in an in-surface direction of said substrate, and detecting a distance between said ejection portion and a droplet given surface on said substrate; and

ejecting to a plurality of portions separated mutually on the substrate at plural times intermittently the droplet of a liquid containing material for forming the electronic device upon the moving, a timing of the ejecting varied according to a result of the detecting.

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8. (Currently Amended) A method of manufacturing an electronic device as claimed in ~~any one of claims~~ claim 1 to 5, wherein the ~~correction of said position to which the droplet is given is made by changing an inclination of said substrate in accordance with the distribution of the distances between said ejecting portion and the droplet given surface on said substrate~~ control of the distance based on the detection result is performed by changing an inclination of said substrate.

9.-17. (Cancelled)

18. (Currently Amended) A method of manufacturing an electronic device as claimed in claim ~~17~~ 1, wherein said ink jet ~~method~~ device is of a system of giving a thermal energy to the liquid to produce a bubble, to thereby eject the droplet.

19. (Currently Amended) A method of manufacturing an electronic device as claimed in claim 17 ~~1~~, wherein said ink jet ~~method~~ device is of a system of ejecting the droplet by a piezo-electric element.

20. (Currently Amended) A method of manufacturing an electron source having a plurality of electron emission elements, comprising the steps of:
~~characterized in that there is provided a step of giving a droplet of a liquid containing a formation material of an electrically conductive member that constitutes said electron emission element to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, and in that said droplet is given while a position on a droplet given surface to which the droplet is given is corrected in accordance with the distribution of distances between said ejecting portion and said droplet given surface on said substrate which occurs when said substrate and said ejecting portion are relatively moved~~

moving a droplet ejecting portion of an ink jet device and a substrate to which a droplet is to be ejected relatively in an in-surface direction of said substrate, and detecting a distance between said ejecting portion and a droplet given surface on said substrate; and

ejecting to a plurality of portions separated mutually on the substrate at plural times intermittently the droplet of a liquid containing material for forming a

conductive member of the electron-emitting device upon the moving under controlling the distance based on a detection result.

21. (Cancelled)

22. (Currently Amended) A method of manufacturing an electron source as claimed in claim 21 20, wherein ~~said detection of the~~ detecting of the distance includes a step of measuring the distances between said ejecting portion and ~~all of the droplet given portions within said droplet given surface~~ predetermined portions separated mutually on the substrate.

23. (Currently Amended) A method of manufacturing an electron source as claimed in claim 21 20, wherein ~~said detection of the~~ detecting of the distance includes a step of measuring a distance between said ejecting portion and ~~a specific portion of said droplet given surface~~ one or some of predetermined portions separated mutually on the substrate.

24. (Currently Amended) A method of manufacturing an electron source as claimed in claim 21 20, wherein ~~said detection of the~~ detecting of the distance includes a step of measuring a distance between said ejecting portion and ~~a specific portion of said droplet given surface,~~ and a step of calculating the distances between said ejecting

~~portion and all of the droplet given portions within said droplet given surface on the basis of said measurement result one or some of predetermined portions separated mutually on the substrate, and a step of calculating the distances between said ejecting portion and others of the predetermined portions separated mutually on the substrate, based on a result of the measuring.~~

25. (Currently Amended) A method of manufacturing an electron source as claimed in ~~any one of claims 20 to 24~~ claim 20, wherein the ~~correction of said position to which the droplet is given is made by maintaining the distance between said ejecting portion and the droplet given surface on said substrate constant~~ the controlling of the distance based on the detection result is performed by maintaining constant the distance between the ejecting portion and each of plural predetermined portions separated mutually on said substrate.

26. (Currently Amended) A method of manufacturing an electron source, comprising the steps of: ~~as claimed in any one of claims 20 to 24, wherein the correction of said position to which the droplet is given is made by changing a timing at which the droplet is ejected from said ejecting portion in accordance with the distribution of the distances between said ejecting portion and the droplet given surface on said substrate~~

moving a droplet ejection portion on an ink jet device and a substrate to which a droplet is to be ejected relatively in an in-surface direction of said substrate, and detecting a distance between said ejecting portion and a droplet given surface on said substrate; and

ejecting to a plurality of portions separated mutually on the substrate at plural times intermittently the droplet of a liquid containing material for forming the electronic device upon the moving, a timing of the ejecting varied according to a result of the detecting.

27. (Currently Amended) A method of manufacturing an electron source as claimed in ~~any one of claims~~ claim 20 to 24, wherein the ~~correction of said position to which the droplet is given is made by changing an inclination of said substrate in accordance with the distribution of the distances between said ejecting portion and the droplet given surface on said substrate~~ controlling of the distance based on the detection result is performed by changing an inclination of said substrate.

28. - 43. (Cancelled)


44. (Currently Amended) A method of manufacturing an electron source ~~having a plurality of electron emission elements with an electrically conductive film having an electron emission portion between a pair of electrodes, characterized in that~~

~~the formation of said electrically conductive film includes a step of giving a droplet of a liquid containing a formation material of said electrically conductive film to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, and in that said droplet is given while a position on said substrate surface to which the droplet is given is corrected in accordance with the distribution of thicknesses of said substrate according to claim 20, wherein said electron emission element has an electrically conductive film having an electron emission portion between a pair of electrodes, and the conductive member is a conductive film.~~

45. (Currently Amended) A method of manufacturing an electron source ~~having a plurality of electron emission elements with an electrically conductive film having an electron emission portion between a pair of electrodes, characterized in that the formation of said electrically conductive film includes a step of giving a droplet of a liquid containing a formation material of said electrically conductive film to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, and in that said droplet is given while the thickness of said substrate is detected, and a position on said substrate surface to which the droplet is given is corrected on the basis of said detection result according to claim 26, wherein said electron emission element has an electrically conductive film having an electron emission portion between a pair of electrodes, and the conductive member is a conductive film.~~

46. - 51. (Cancelled)

52. (Currently Amended) A method of manufacturing an electron source ~~having a plurality of electron emission elements with an electrically conductive film having an electron emission portion between a pair of electrodes, characterized in that the formation of said pair of electrodes and said electrically conductive film includes a step of giving the respective droplets of a liquid containing a formation material of said pair of electrodes and a liquid containing a formation material of said electrically conductive film to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, and in that said droplets are given while a position on a droplet given surface to which the droplets are given is corrected in accordance with the distribution of distances between said ejecting portion and said droplet given surface on said substrate which occurs when said substrate and said ejecting portion are relatively moved~~ according to claim 20, wherein said electron emission element has an electrically conductive film having an electron emission portion between a pair of electrodes, and said conductive member is the electroconductive film and the pair of electrodes.



53. (Currently Amended) A method of manufacturing an electron source ~~having a plurality of electron emission elements with an electrically conductive film having an electron emission portion between a pair of electrodes, characterized in that~~

~~the formation of said pair of electrodes and said electrically conductive film includes a step of giving the respective droplets of a liquid containing a formation material of said pair of electrodes and a liquid containing a formation material of said electrically conductive film to a plurality of portions on a substrate while said substrate and a droplet ejecting portion are moved relatively in an in-surface direction of said substrate, and in that said droplets are given while a distance between said ejecting portion and the droplet given surface on said substrate is detected, and a position on said droplet given surface to which the droplet is given is corrected on the basis of said detection result according to claim 26, wherein said electron emission element has an electrically conductive film having an electron emission portion between a pair of electrodes, and said conductive member is the pair of electrodes and the electroconductive film.~~

54. - 70. (Cancelled)

71. (Currently Amended) A method of manufacturing an electron source as claimed in claim 70 20, wherein said ink jet ~~method~~ device is of a system of giving a thermal energy to the liquid to produce a bubble, to thereby eject the droplet.

72. (Currently Amended) A method of manufacturing an electron source as claimed in claim 70 20, wherein said ink jet ~~method~~ device is of a system of ejecting the droplet by a piezo-electric element.

73. (Currently Amended) A method of manufacturing an image forming apparatus having an electron source and an image forming member onto which electrons are irradiated from said electron source, characterized in that said electron source is manufactured by a method as claimed in claim 20.

74. - 94. (Cancelled)

95. (New) A method of manufacturing an electronic device as claimed in claim 7, wherein

said ink jet device ejects the liquid droplet by applying thermal energy to the liquid to generate a bubble in the liquid.

96. (New) A method of manufacturing an electronic device as claimed in claim 7, wherein

said ink jet device ejects the liquid droplet by a piezo-electric element.

97. (New) A method of manufacturing an electron source as claimed in claim 26, wherein

said ink jet device ejects the liquid droplet by applying thermal energy to the liquid to generate a bubble in the liquid.

98. (New) A method of manufacturing an electron source as claimed in claim 26, wherein said ink jet device ejects the liquid droplet by a piezo-electric element.

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